

Hugo Flecker and the North Queensland Naturalists' Club

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Abstract

The foundation and growth of the North Queensland Naturalists' Club and the establishment and growth of the Club's herbarium (CAIRNS) is examined. The role played by Dr Hugo Flecker, the foundation president of the Club and curator of the collection for over 25 years, is discussed and a condensed biography of his life given. Flecker's ties with taxonomic botanists in major Australian and overseas herbaria are outlined. Though primarily a collection of North Queensland plants, the CAIRNS herbarium received material on exchange or as gifts from many Australian and overseas sources. Various estimates of the size of the collection have been made but it would appear to be upwards of 10,680 gatherings. The types of 29 names have been located to date. The status of these is indicated and a list of type material collected by Flecker is given. In 1971 the collection was donated to the CSIRO Division of Forest Research at Atherton (QRS).

In August 1971, the substantial plant collection of the North Queensland Naturalists' Club was donated to the CSIRO herbarium at Atherton (QRS). At that time, the Flecker collection, as the Naturalists' Club herbarium was known, was a significant addition to the newly established QRS collection. The importance of the Flecker collection is not widely appreciated. This paper traces the history of the collection and discusses the role of Dr Hugo Flecker in the formation of the North Queensland Naturalists' Club and in the foundation and growth of its plant collection.

Biographical information

Several short biographies of Hugo Flecker have been published (Lester 1957; McDonald 1957; Stokes 1981) and a detailed review of his life and work is currently being prepared (Clarkson, in prep.).

Hugo Flecker (Fig. 1) was born in the Melbourne suburb of Prahran on the 7 December 1884. His early life was spent at Henley Beach in South Australia where his parents were hotel keepers. He received his early education at the Prince Alfred College in Adelaide before commencing medical studies at Adelaide University. Industrial problems in the teaching hospitals in South Australia interrupted his studies and his course was completed at Sydney University, from which he graduated M.B., Ch.M. in 1908. Following this, Flecker worked at various hospitals in Sydney before undertaking post graduate studies in Edinburgh which led to his admission as a Fellow of the Royal College of Surgeons (Edinburgh) in 1912. Two years were spent working in Canada before he returned to Australia shortly before the outbreak of the First World War. Enlisting with the 1st Australian Imperial Force at Sydney on 20 August 1914, Flecker served with the rank of Captain, and later Major, with the Royal Army Medical Corps at various casualty clearing stations and field hospitals in Egypt and western Europe. In September 1916, while based at Wimeraux in France, he was hospitalised suffering from derma-

titis. This failed to respond to treatment and eventually resulted in his being invalided home and demobilized in April 1917. The doctor was plagued by this skin condition for the rest of his life and it may have led to his post war specialisation in radiology. In this field he was not required to scrub up with the irritating carbolic soaps as regularly as he would have had he persevered in surgery. In the then fledgling speciality of radiology, Flecker was regarded highly by his peers. He pioneered the use of therapeutic radiotherapy in Australia for the treatment of malignant disease (Flecker 1923) and he was responsible for several important radiological studies of skeletal development (Flecker 1942).

A combination of factors led Flecker to quit Melbourne and move to Cairns in Far North Queensland. The depression years were hard on Flecker and his family. He had married Thelma Arnold within a few days of returning from his overseas military service and by 1932 he had two children, a daughter Alice, then aged 14, and a son Pat, who was 12. Even though well established in his medical practice, patients often left medical bills unpaid and the family found it difficult to survive financially. A respiratory allergy, from which Flecker suffered and which led to bouts of hay fever, was aggravated by seasonal conditions in Victoria. Finally, Flecker's life long interest in natural history may have been the catalyst. An x-ray technician who had worked with Flecker in Melbourne was a North Queenslander by the name of Bruce Cummings. Flecker and Cummings had developed a strong friendship, no doubt sparked by their mutual interest in natural history. The pair often discussed the largely unexplored wonders which abounded in tropical Queensland (B. Cummings, pers. comm.). Cummings had returned to the North and was living in Cairns when Flecker decided to move there in 1932. The decision to leave Melbourne could not have been an easy one. It meant leaving his wife to care for the family home in St Kilda for the depressed economy precluded



Fig. 1. Dr Hugo Flecker, taken prior to 1951, when in his mid-sixties.

its sale. It also meant leaving a major city with a well established medical infrastructure for a provincial town which provided little in the way of sophisticated medicine. As things turned out, the family separation proved to be much longer than had probably been anticipated. By the time the Melbourne property could have been sold, the Second World War had broken out and life was considered far safer in Victoria because of the ever present threat of a Japanese invasion in the Far North. It was 1948 before Hugo and Thelma were united in Cairns.

Flecker's interest in natural history was life long. As a boy, he belonged to a group known as the Boy's Field Club and had collected sea shells extensively along the South Australian coastline. While at university, he was a member of the Naturalists' Club of New South Wales and the Sydney University Students' Science Club. After the war years he joined the Field Naturalists' Club of Victoria. On arriving in North Queensland and finding no organisation to co-ordinate the activities of the amateur naturalists in the area, Flecker prompted the Mayor of Cairns, Alderman W. A. Collins, to chair a public meeting to consider the formation of such a club. The outcome of the meeting, held on 19 August 1932, was the establishment of the North Queensland Naturalists' Club with Hugo elected foundation president. From then until his death in 1957, the activities of Flecker the medical practitioner and Flecker the naturalist were intimately interwoven with the activities of the Naturalists' Club. In those 25 years, Flecker served as president for 16 years, 14 of these consecutively (1932–1946), was vice-president from 1948 until his death and patron from 1947.

The close association of natural history and medicine led to a series of papers on human deaths and injuries produced by plants and animals (Appendix I). Probably the best known of these are those on jellyfish stings. His work in this field was acknowledged by R. V. Southcott of South Australia who named the organism responsible for numerous fatal stings in tropical Australian waters, *Chironex fleckeri* (Southcott 1956). Following a resolution of a medical congress held in Cairns in 1935, Flecker maintained a registry of injuries caused by plants and animals. This register, containing case histories and associated investigations, disappeared about the time of Flecker's death (Barnes 1964) and has not been rediscovered.

Hugo died in Calvary Hospital in Cairns on 25 June 1957 after a short illness. He was survived by his wife and two children. Even following his death, recognition of his contribution to medicine, natural history and civic life continued. In 1957, the Royal Geographical Society (Queensland Branch) awarded him the Thompson Foundation Memorial Medal, its highest distinction. The medal is inscribed 'Awarded posthumously to Dr Hugo Flecker for outstanding service to Geographical Science'. In 1971, the Cairns City council named its botanic gardens at Edge Hill the 'Flecker Botanic Gardens'. A street in the same suburb bears his name and a medical centre, which houses many of the consultant medical specialists in Cairns, was named 'Flecker House' when it opened in 1983. He is commemorated in the names of six plants and two animals (Appendix I).

The North Queensland Naturalists' Club

In October 1932, under Flecker's direction and guidance, the Naturalists' Club began the production of its journal and magazine, *The North Queensland Naturalist*. Initially a chatty monthly newsletter, this soon developed into an eight page quarterly publication which included a great deal of information of interest to professional biologists, including systematic botanists. This standard was maintained for a number of years after Flecker's death but with waning interest in the Club, the journal, though still produced, has virtually reverted to the newsletter format. Between 1935 and 1964 but particularly prior to 1957, quite a number of new taxa were described and new combinations made in the journal. These are listed in Appendix III. The orchid taxonomists, H. M. R. Rupp, T. E. Hunt, S. F. St. Cloud, W. H. Nieholls and A. W. Dockrill, in particular, published a number of new taxa in *The North Queensland Naturalist*. Most of the plants described had been discovered through the efforts of Club members.

From May 1933 until December 1948, Flecker published a census of North Queensland plants as a supplement to the Club journal (Flecker 1950a). Initially it was little more than a compilation of data from F. M. Bailey's (1899–1902) *The Queensland Flora* but, as the knowledge of Queensland's tropical flora was extended, addenda and corrigenda were produced. The list was never published as a single volume but the portions dealing with orchids and ferns were issued separately in 1945 and 1946 respectively as saleable publications. The orchid list was revised by A. W. Dockrill in 1966 (Dockrill 1966). A list of edible plants in North Queensland compiled by Flecker and pub-

lished serially in *The North Queensland Naturalist* between March 1944 and September 1947 was collated and issued separately by the Club in 1948 (Flecker *et al.* 1948).

In February 1935 Flecker began a column in a Cairns weekly newspaper headed 'Current Nature Topics'. This column must have proved popular with readers for it ran continuously, through more than 1,036 issues, until Flecker's death. Topics discussed in the column ranged widely from the activities of the Naturalists' Club to new or interesting discoveries and the comings and goings of scientists to the Far North. Through the column, Flecker attempted to raise the readers' awareness of environmental issues such as the problems associated with uncontrolled fires on the hillsides around Cairns, the threat posed by the introduction of exotic animals such as the cane toad and gambusia (mosquito fish), and the impact of large numbers of tourists visiting potentially fragile areas such as Green Island and Michaelmas Cay. The consequences of soil erosion, the spread of introduced weeds such as lantana and the shooting of kangaroos were also discussed. Flecker frequently mentioned the need for a museum and a botanic garden in Cairns, as well as the desirability of using native plants in cultivation rather than exotics. The range of topics discussed show that Flecker was many years ahead of his time. Issues he attempted to draw to people's attention in the 1930s and 40s have become major topics of concern for the conservation lobby of the 1970s and 80s.

A herbarium for Cairns

In a letter dated 2 October 1933, Cyril White, the Queensland Government Botanist, wrote to Flecker:

Personally I think if the North Queensland Naturalists' Club wants to do good work with the flora the best way, perhaps, would be to form a local herbarium, and to collect plants assiduously on your various rambles, sending specimens to me for identification and report. In this way, working in the rich flora of North Queensland, you cannot fail to make extensive additions to the knowledge of our flora, because the flora of North Queensland is far from being completely known.

Flecker took up this suggestion with some vigour and the North Queensland Naturalists' Club herbarium was begun. The growth of the collection can be traced by reference to the weekly newspaper column. From time to time Flecker would include a short article on the herbarium noting how many specimens it held, where material had been coming from and generally conveying the message to readers that a herbarium in Far North Queensland was a very useful thing to have.

In April 1937 there is reference to 1,603 specimens (? species), by January 1940 this had grown to 3,011 and by March 1950 the collection stood at 5,014. Various estimates of the final size of the collection have been seen. The most accurate is probably that made by CSIRO staff at Atherton as they processed the collection for incorporation at QRS after it was donated to them in 1971. A total of 10,680 gatherings were

Whilst in Melbourne, the zoologists agreed that the term sea wasp is thoroughly objectionable and quite misleading. No such creature or creatures can be definitely recognised by such name - ~~they~~ which might just as readily be applied to copepods or other stinging creatures.

I will post up a very recent number of the Medical Journal of Australia with further notes on Dekkandji. The only other sea venoms, I have written on are Stone Fish - Octopus - and Conus Shell poisoning. I have no reprint of the latter which appeared in Med. Jr. Aust.

Best of greetings

Yours sincerely,
H. Flecker.

Fig. 2. Flecker's handwriting from a letter to Dr Len Webb dated 20 January 1957.

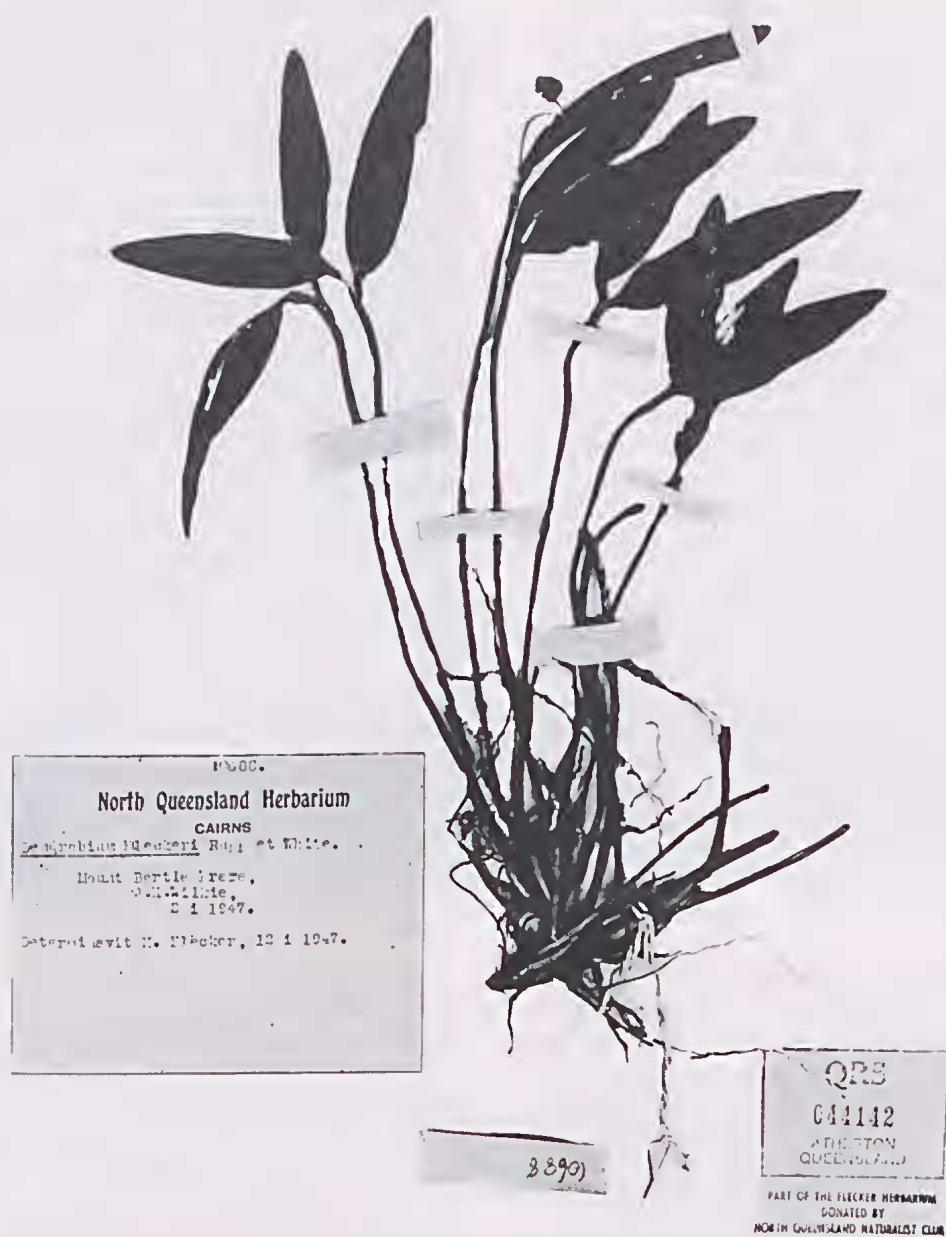


Fig. 3. Sheet from the North Queensland Naturalists' Club herbarium as incorporated in QRS, showing a typical label and paper tag with accession number. The stamp in the lower right hand corner readily identifies material from the Flecker collection at QRS.

received by QRS. These included 9,923 angiosperms, 72 gymnosperms, 468 bryophytes and 217 marine algae and fungi. Originally material was collected by Flecker and other local Club members but eventually enthusiasts from further afield and members of the public began sending material for identification. Most of these found their way into the collection. A few of the more notable collectors were A. de Lestang who sent specimens from Adel's Grove near what is now Lawn Hill National Park, K. A. MacPherson who collected in the Mackay-Proserpine area, and Miss E. Henry and Mrs Sparvell who were responsible for many new or interesting mosses. Flecker also exchanged duplicates with collectors within Australia and overseas.

Initially, as White had suggested, collections were sent to the Queensland Herbarium (BRI). Usually duplicates were sent with the first specimen being retained for the Cairns collection but occasionally, it seems, there were no duplicates and Flecker would request the return of the material. As Flecker and his

work became more widely known and contacts were developed with botanists elsewhere, material was referred to specialists in several major herbaria. In this way, mosses from North Queensland found their way to H. N. Dixon, one of the leading bryologists of the day, and orchids were sent to H. M. R. Rupp and W. H. Nicholls. It has also been suggested (J. Tracey, pers. comm.) that, as material from Flecker was often somewhat scrappy, staff at BRI did not particularly look forward to dealing with the often large collections sent down for identification and often chided him for the poor quality of the material. No documentary evidence to this effect has been located at BRI but Jim Willis (pers. comm.), former Assistant Government Botanist at the National Herbarium of Victoria (MEL), reports receiving 'copious scraps of botanical material' from Flecker in the 1940s 'for the simple reason that Brisbane declined to deal with them'. He also states that 'Melbourne got to dread the arrival of Flecker specimens and, so not to offend such a nice

chap, finally pleaded increasing pressure of work as an excuse to avoid wasting time on the identification of these fragmentary and hopeless bits of material'. To be fair to Flecker, it should be realised that not all of the material he was sending for identification was collected by himself. Quite a lot of material was passed on from others.

As White had expected, extensive additions to the knowledge of the flora were made by Flecker and his associates. With the description of new taxa, the herbarium began to accumulate type material. A search of the collections has so far yielded 24 type specimens (29 names). In most instances these are isotypes, however, the holotypes of five orchid names attributed to S. F. St. Cloud have been located. A full list of types and authorities for the names is given in Appendix IV. As far as has been ascertained, Flecker himself was responsible for the collection of 25 gatherings nominated as types (Appendix V). Fifteen of these are angiosperms while the remaining ten are mosses. Not all of these have been located amongst the Flecker material at QRS.

The North Queensland Naturalists' Club herbarium was listed in the second edition of the International Association for Plant Taxonomy's *Index herbariorum* (Lanjouw and Stafleu 1954). Flecker chose the acronym CAIRNS. It has appeared in each edition since with the entry in the current seventh edition (Holmgren *et al.* 1981) noting the incorporation in QRS.

Some care should be taken in the citation of specimens from the Flecker collection. The label usually bears a number, most often typed at the top centre. A small paper tag bearing the same number is often attached to the specimen. Several workers, for example Dixon (1941), Fosberg (1938) and Munir (1984), have attributed this number to the collector. Most likely this is a herbarium accession number. It appears that a master register was kept and that the number was assigned as each specimen was processed. However, there was no such register amongst the Flecker material when it arrived at QRS and recent attempts to discover its whereabouts have been unsuccessful. Three typed sheets found with material sent by Flecker to MEL for identification support this master register theory. Part of the list reads:

- 11929. Lake Barrine, Mrs S. E. Stephens, November, 1947.
- 11977. Cultivated at Thursday Island, H. Flecker, 19.12.47.
- 12042. Growing on *Pyrrhosia rupestris*, Murrurundi, New South Wales, altitude 1200 feet, Dr B. J. Middleton, posted 10.1.48.
- 12100. Growing on log, Miller's Beach, H. Flecker, 18.1.48.
- 12111. Growing amongst sedges, Prior Creek, R. Le Rossignol, 26.1.48.
- 12142. Studley Park, Victoria, H. T. Clifford, 15.6.47.
- 12143. Mareeba, H. Flecker, 28.10.47.

This shows material collected by five different individuals. Each collection is assigned a number in an ascending sequence with material collected in 1948 numbered ahead of some collected in 1947. To avoid confusion or ambiguity it is suggested that material from the North Queensland Naturalists' Club her-

barium be cited as CAIRNS ##### or North Queensland Naturalists' Club Herbarium No. #####.

One of Flecker's special interests in the 25 years he spent in Cairns was to see the establishment of a museum which would incorporate the Naturalists' Club herbarium (Flecker 1950b). His active lobbying obtained temporary accommodation for the collection but unfortunately he did not live to see a permanent location secured. Initially the herbarium was housed in a storeroom supplied and erected by the Cairns City Council at its nursery at Edge Hill. In 1949 the collection was moved to Kuranda Barracks, temporary war time buildings erected by the Royal Australian Navy on reclaimed land on the Cairns Esplanade. It remained there for 18 years until redevelopment of the site led to the demolition of the buildings in 1967. Then, by arrangement with the Cairns City Council, the collection was returned to the original building at Edge Hill.

After Flecker's death, the collection was curated on and off by various Club members including Leonard J. Brass. Brass, well known for his outstanding work on the Archbold expeditions to Papua New Guinea and Cape York Peninsula, retired to Cairns in 1967 and acted as honorary curator until failing health forced him to relinquish the position in 1971 (Stokes 1982). In that same year, with no one to replace Brass, the Club wrote to the Forestry and Timber Bureau (letter from Marion Cassels, secretary of the North Queensland Naturalists' Club):

After much discussion with our Committee and having written to all members of the Club giving them the details of our proposal, we would like to offer to you, the Forestry Research Institute, the Flecker Herbarium which is in the Club's possession. Now that our Curator, Dr. Leonard J. Brass, is unable to look after this Herbarium, it is in danger of being neglected as there is no one in the Club able to take his place. Rather than see this valuable collection deteriorate and be wasted, we would like it to come to you where we know it will be properly housed, curated and used and it will be still in North Queensland, a point that the late Dr. Flecker was very keen about. At the moment the Herbarium is housed at the Botanical Gardens in Cairns.

The Flecker collection is now fully incorporated in the general collection at QRS. Specimens were remounted on the standard herbarium sheets in use there but, as each sheet bears a stamp on the lower right hand corner acknowledging the gift, the material is readily identified (Fig. 3). Since there is no cryptogamic collection at QRS, in November 1981 the bryophytes were passed on to Herbarium Australiense, now the Australian National Herbarium (CANB).

In a roundabout way Flecker's dream had become a reality. The Naturalists' Club had been unable to establish a permanent home for the collection from their own resources but they had ensured it would be properly housed and curated and that it would remain in North Queensland.

Acknowledgements

I extend my thanks to the following people who have provided assistance in various ways. Dr Bernie Hyland of CSIRO Atherton has at all times provided free and ready access to the facilities at QRS. Mrs Dawn Magarry, the secretary of the North Queensland Naturalists' Club, allowed me to copy a full set of Flecker's weekly press column, 'Current Nature Topics' and helped me to acquire a complete set of

the Club's journal, *The North Queensland Naturalist*. Dr George Scott of Queens College, University of Melbourne, answered many queries regarding Flecker's bryophyte collection. Mr Ken Cotterill, the librarian with the Department of Primary Industries, Mareeba, obtained much of the literature required and read and commented on the manuscript. Mr Hans Dillewaard of the Queensland Herbarium, Indooroopilly, assisted with the photographic work. The Central Army Records Office in Melbourne allowed me access to Flecker's record of military service. Finally, I extend my deepest appreciation to Mrs Alice O'Brien, Hugo Flecker's daughter, and his son Dr Pat Flecker of Townsville and Pat's wife Mary for their help in my research into their father's life. Their assistance has been invaluable.

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Appendix I

Published works by Hugo Flecker dealing with human deaths and injuries produced by plants and animals: all published in *Med. J. Australia*

Flecker, H. (1936). Cone shell mollusc poisoning, with a report of a fatal case. April 4: 464-466.

Flecker, H. (1937). Injuries caused by Australian scorpions. June 5: 875-876.

Flecker, H. (1940). Snake bite in practice. July 6: 8-13.

Flecker, H. & McSweeney, A. (1944). Irritation produced by procession caterpillar (*Oehrogaster contraria*). August 5: 137-138.

Flecker, H. (1944). Sudden blindness after eating 'Finger Cherries' *Rhodomyrtus macrocarpa*. August 19: 183-185.

Flecker, H. (1944). More fatal cases of bites of the taipan (*Oxyranns scutellatus*). October 7: 383-384.

Flecker, H. (1945). Injuries by unknown agents to bathers in North Queensland. January 27: 98.

Flecker, H. (1945). Injuries produced by plants in tropical Queensland. June 23: 636-637.

Flecker, H. (1945). Injuries by unknown agents to bathers in North Queensland. July 28: 128-129.

Reid, C. C. & Flecker, H. (1950). Snake bite by a taipan with recovery. January 21: 82-83.

Flecker, H. (1952). Fatal stings to North Queensland bathers. January 12: 35-38.

Flecker, H. (1952). Fatal stings to North Queensland bathers. March 29: 458.

Flecker, H. (1952). Irukandji sting to North Queensland bathers without production of weals but with severe general symptoms. July 19: 89-91.

Flecker, H. (1952). Bite from broad-headed snake *Hoplocephalus bungaroides* (Boie). March 15: 368-9.

Flecker, H. & Cotton, B.C. (1955). Fatal bite from octopus. August 27: 329-332.

Flecker, H. (1956). Injuries from stone fish. September 8: 371-372.

Flecker, H. (1957). Further notes on Irukandji stings. January 5: 9.

Appendix II

Eponymy

Plants

Acacia fleckeri Pedley, *Austrobaileya* 1(2): 211 (1978).

Cupaniopsis fleckeri S. Reynolds, *Austrobaileya* 2(1): 47-48 (1984).

Dendrobium fleckeri Rupp & C. White, *Queensland Naturalist* 10: 25-27 (1937).

Ixora biflora Fosberg var. *fleckeri* Fosberg, *J. Bot.* 76: 276-277 (1938).

Liparis fleckeri Nicholls, *North Queensland Naturalist* 6(53): 1-3 (1938).

Neostrearia fleckeri L.S. Smith, *Proc. Roy. Soc. Queensland* 69(4): 46-48 (1958).

References to two mosses *Campylopus fleckeri* and *Philonotis fleckeri* have been seen, both attributed to H. N. Dixon but, as no place of publication has yet been found (G. Scott, pers. comm.), they have been considered *nomina nuda*.

Animals

Chironex fleckeri R.V. Southcott, *Austral. J. Mar. Freshwater Res.* 7: 255-280 (1956).

Eustaena fleckeri (Watson), *Mem. Nat. Mus. Victoria* 13: 19 (1941).

Appendix III

New taxa described and new combinations made in *The North Queensland Naturalist*

New Taxa — plants	Volume & Date
Hymenophyllaceae	
<i>Meiodium contiguum</i> D. A. Smith	80 Sept. 1946
Meliaceae	
<i>Dysoxylum serieiflorum</i> C. White	33 June 1935
Orchidaceae	
<i>Acianthus sublestus</i> Doekrill	110 Jan. 1955
<i>Bulbophyllum macphersonii</i> Rupp var. <i>spathulatum</i> Doekrill	117 Mar. 1957
<i>B. wanjurum</i> T. Hunt	82 Mar. 1947
<i>B. wilkianum</i> T. Hunt	82 Mar. 1947
<i>Cadetia ruppilii</i> St. Cloud	110 Jan. 1955
<i>Cleisostoma cornutum</i> Rupp	39 Dec. 1935

<i>C. orbiculare</i> Rupp	19	Apr. 1934
<i>Corybas abellianus</i> Dockrill	112	Sept. 1955
<i>Cymbidium leroyi</i> St. Cloud	112	Sept. 1955
<i>Dendrobium aurantiaco-purpureum</i> Nicholls	68	Mar. 1942
<i>D. baseyanum</i> St. Cloud	110	Jan. 1955
<i>D. beckeri</i> F. Muell. var. <i>racemosum</i> Nicholls	45	June 1936
<i>D. canaliculatum</i> R. Br. var. <i>pallidum</i> Dockrill	115	May 1956
<i>D. cancröides</i> T. Hunt	83	June 1947
<i>D. foederatum</i> St. Cloud	111	May 1955
<i>D. fusiforme</i> F. Muell. forma <i>magnifica</i> Dockrill	114	Feb. 1956
<i>D. giddinsii</i> T. Hunt	87	June 1948
<i>D. luteociliun</i> Rupp	77	Dec. 1945
<i>D. variable</i> Nicholls	56	Dec. 1938
<i>D. vinicolor</i> St. Cloud	116	Sept. 1956
<i>D. wilkianum</i> Rupp	67	Dec. 1941
<i>Eria irukandjiana</i> St. Cloud	111	May 1955
<i>E. queenslandica</i> T. Hunt	85	Dec. 1947
<i>Gastrodia queenslandica</i> Dockrill	136	Sept. 1964
<i>Liparis bracteata</i> T. Hunt	81	Dec. 1946
<i>L. fleckeri</i> Nicholls	53	Mar. 1938
<i>Mobilabium</i> Rupp, gen. nov.	78	Mar. 1946
<i>M. hamatum</i> Rupp	78	Mar. 1946
<i>Oberonia attenuata</i> Dockrill	126	Dec. 1960
<i>Pterostylis carinata</i> Dockrill	110	Jan. 1955
<i>Saccolabium loadcranum</i> Rupp	101	June 1952
<i>S. subulatum</i> Rupp	105	June 1953
<i>Sarcochilus olivaceus</i> Lindley	60	Dec. 1939
var. <i>borealis</i> Nicholls		
<i>Taeniophyllum cymbiforme</i> T. Hunt	82	Mar. 1947
<i>T. flavum</i> Dockrill	125	Mar. 1960
<i>T. wilkianum</i> T. Hunt	80	Sept. 1946

New Combinations — plants

Gleicheniaceae		
<i>Sticherus falbellatus</i> (R. Br.) Ching	80	Sept. 1946
var. <i>compactus</i> (C. White & Goy)		
D. A. Smith		

Orchidaceae

<i>Dendrobium lichenastrum</i> (F. Muell.) Kanzlin	115	May 1956
var. <i>prenticei</i> (F. Muell.) Dockrill forma		
<i>aurantiaco-purpureum</i> (Nicholls) Dockrill		

New taxa — animals

Arachnida — Scorpionida		
<i>Lychas lappa</i> L. Glauert	109	Oct. 1954
Insecta — Hymenoptera		
<i>Habrocytus garibaldia</i> A. A. Girault	55	Sept. 1938
<i>Inkaka</i> A. A. Girault, gen. nov.	58	June 1939
<i>I. 4-dentata</i> A. A. Girault	58	June 1939
Insecta — Lepidoptera		
<i>Candalides hyacintha</i> (Semper) var. <i>josephina</i> Harris	103	Dec. 1952
Pisces		
<i>Dactylanthias mcMichaeli</i> G. P. Whitley	131	June 1962
<i>Scorpaena mouhoni</i> G. P. Whitley	127	Mar. 1961

Appendix IV

Type specimens located in the North Queensland Naturalists' Club herbarium

Austrobaileyaceae		
<i>Austrobaileya maculata</i> C. White	ISOTYPE	
Caesalpiniaceae		
<i>Cassia queenslandica</i> C. White	ISOTYPE	
Cunoniaceae		
<i>Ceratopetalum corymbosum</i> C. White	ISOTYPE	
Hamamelidaceae		
<i>Neostrearia fleckeri</i> L. S. Smith	ISOTYPE	
Myrtaceae		
<i>Acmena macrocarpa</i> C. White	ISOTYPE	
<i>Lindsayomyrtus brachyandrus</i> (C. White) Hyland & Steenis	ISOTYPE	
<i>Xanthostemon brachyandrus</i> C. White	ISOTYPE	
Orchidaceae		
<i>Bulbophyllum evasum</i> Hunt & Rupp	ISOTYPE	

<i>Cadetia ruppil</i> St. Cloud	HOLOTYPE
<i>Cymbidium leroyi</i> St. Cloud	HOLOTYPE
<i>C. madidum</i> var. <i>leroyi</i> (St. Cloud) Menninger	HOLOTYPE
<i>Dendrobium foederatum</i> St. Cloud	HOLOTYPE
<i>D. vinicolor</i> St. Cloud	HOLOTYPE
<i>Eria irukandjiana</i> St. Cloud	HOLOTYPE
Poaceae	
<i>Lolium x hubbardii</i> Jansen & Wachter ex B. Simon	ISOTYPE
Proteaceae	
<i>Orites racemosa</i> C. White	ISOTYPE
<i>Sphalmium racemosum</i> (C. White) Briggs, Hyland & Johnson	ISOTYPE
Rubiaceae	
<i>Hodgkinsonia frutescens</i> C. White	ISOSYNTYPE
<i>Ixora orophila</i> C. White	ISOTYPE
Rutaceae	
<i>Zieria rimulosa</i> C. White	ISOTYPE
Sapindaceae	
<i>Alectryon tropicus</i> (S. Reynolds) S. Reynolds	ISOTYPE
<i>Atalaya rigida</i> S. Reynolds	ISOTYPE
<i>Cupaniopsis fleckeri</i> S. Reynolds	ISOTYPE
<i>Heterodendrum tropicum</i> S. Reynolds	ISOTYPE
Solanaceae	
<i>Solanum dimorphospinum</i> C. White	ISOTYPE
Symplocaceae	
<i>Symplocos ampulliformis</i> C. White	ISOTYPE
<i>S. cochinchinensis</i> (Lour.) S. Moore subsp. <i>thwaitesii</i> (F. Muell.) Nootb.	ISOTYPE
var. <i>pilosuscula</i> Nootb.	
<i>S. cochinchinensis</i> (Lour.) S. Moore subsp. <i>thwaitesii</i> (F. Muell.) Nootb.	ISOTYPE
var. <i>montana</i> (C. White) Nootb.	
<i>S. stawellii</i> F. Muell. var. <i>montana</i> C. White	ISOTYPE

Appendix V

Type material collected by Hugo Flecker

Angiosperms

Cunoniaceae	
<i>Ceratopetalum corymbosum</i> C. White	
Hamamelidaceae	
<i>Neostrearia fleckeri</i> L. S. Smith	
Loganiaceae	
<i>Gaertnera australiana</i> C. White	
Myrtaceae	
<i>Acmena macrocarpa</i> C. White	
Orchidaceae	
<i>Bulbophyllum evasum</i> Hunt & Rupp	
<i>Cleisostoma cornutum</i> Rupp	
<i>Liparis fleckeri</i> Nicholls	
Poaceae	
<i>Lolium x hubbardii</i> Jansen & Wachter ex B. Simon	
Rubiaceae	
<i>Hodgkinsonia frutescens</i> C. White	
<i>Ixora biflora</i> Fosberg var. <i>fleckeri</i> Fosberg	
<i>I. orophila</i> C. White	
Sapindaceae	
<i>Alectryon tropicus</i> (S. Reynolds) S. Reynolds	
<i>Cupaniopsis fleckeri</i> S. Reynolds	
<i>Diploglottis macrantha</i> L. S. Smith ex S. Reynolds	
<i>Heterodendrum tropicum</i> S. Reynolds	
Symplocaceae	
<i>Symplocos cochinchinensis</i> (Lour.) S. Moore subsp. <i>thwaitesii</i> (F. Muell.) Nootb.	
var. <i>montana</i> (C. White) Nootb.	
<i>S. stawellii</i> F. Muell. var. <i>montana</i> C. White	

Bryophytes

Brachytheciaceae	
<i>Rhynchostegium inaequale</i> Dixon	
Entodontaceae	
<i>Entodon terrae-reginae</i> Dixon	
Dicranaceae	
<i>Campylopus excurrens</i> Dixon	
Fissidentaceae	
<i>Fissidens patulifolius</i> Dixon	

Orthotrichaceae

Macromitrium funiforme Dixon

Pottiaceae

Barbula incerta Dixon, *nom. illeg.*, non Schum. 1803

Pterobryaceae

Callicostella rugiseta Dixon

Calyptothecium subcostatum Dixon

Endotrichella dietrichiae C. Muller var. *longiseta* Dixon

Rhizogoniaceae

Mesochaete grandiretis Dixon